k of about 10, can reduce an erasing time by three orders of magnitude in comparison with 15 nanometer thick ONO (with ONO referring to a sandwich of silicon dioxide, silicon nitride, and silicon dioxide). The ONO has a k of about 10. Aluminum oxide can reduce the erasing voltage of a flash memory device by about 40% compared with silicon dioxide, and about 27% compared with ONO of the same thickness as the aluminum oxide.--.

B1 cont

Please replace the paragraph beginning at line 18 of page 11 with the following clean replacement paragraph in accordance with 37 C.F.R. § 1.121(b)(1)(ii):

--The evaporation of silicon monoxide can be readily accomplished. Silicon monoxide can be evaporated from a thermal source and deposited onto a "cold" (room temperature) substrate with good adhesion. Silicon monoxide films formed by thermal evaporation have many attractive optical, electrical, mechanical and thermal properties, which can make the films suitable for many semiconductor applications. For instance, silicon monoxide can be thermally evaporated at much lower temperatures than silicon, silicon dioxide, or silicon nitride (Si_3N_4), and it condenses on cooler substrates in a uniform and adherent stoichiometric silicon monoxide film when evaporated at high vacuum. In fact, before the present day technology of silicon dioxide deposition by CVD (chemical vapor deposition), and when sputtering was not available, silicon monoxide was deposited by thermal evaporation and subsequently oxidized for rapid thermal oxidation. Such technique demonstrated the possibility of converting silicon monoxide deposited at room temperature to silicon dioxide by rapid thermal annealing at 700°C to 1,100°C, but with a

B2

B3 cont

duration of only a few seconds, as compared with the ordinary thermal oxidation which takes a period ranging from 30 to 60 minutes at 1,000°C.--.

Please replace the paragraph beginning at line 14 of page 12 with the following clean replacement paragraph in accordance with 37 C.F.R. § 1.121(b)(1)(ii):

--Another aspect of silicon monoxide chemistry is that it has been shown that the production of silicon dioxide films on a large substrate area by ion deposition of silicon monoxide can be accomplished. For instance, silicon dioxide films can be produced by active evaporation of silicon monoxide with oxygen assisted deposition (IAD). In addition to the benefits of ion bombardment on film properties, this approach can offer attractive advantages over electron beam evaporation of silicon dioxide. For instance, the evaporation source can be relatively cheap, simple, and easy to control. The production of silicon dioxide films on over 41 inches diameter by resistance evaporation of silicon monoxide and simultaneous oxygen ion bombardment from a cold cathode ion source has also been achieved. Additionally, processes have been developed to convert silicon monoxide to silicon dioxide during deposition by the use of an ion beam. However, additional oxygen should be supplied in a sufficiently energetic process to provide the material conversion during or after the silicon monoxide deposition on the surface.--.

B3

In the Claims

Please replace the indicated claims with the following clean versions of the claims, in accordance with 37 C.F.R. § 1.121(c)(1)(i). Cancel all previous versions of any indicated claim. A marked up version showing amendments to any claims being changed is provided in one or more accompanying pages separate from this amendment in accordance with 37 C.F.R. § 1.121(c)(1)(ii). Any claim not accompanied by a marked up